

- 15 -

Claims

1. A system for the determination of at least one physical property of a compound which comprises;

(i) a microfabricated device having an internal surface defining a conduit through which fluid may flow, compound being present in the fluid,

(ii) the conduit containing an agent to which the fluid is brought into contact;

(iii) a detector for measuring the amount of compound or compound derivative present within the fluid or the agent or both; wherein partitioning of the compound through a partition interface formed between the fluid and the agent and presence of compound in either the fluid or agent or both is measured to determine the physical property.

2. A system as claimed in claim 1 which additionally comprises means for moving the fluid through the conduit.

3. A system as claimed in claim 1 or 2 wherein the detector is an integral part of the microfabricated device.

4. A method for the measurement of one or more physical property of a compound in a microfabricated device which method comprises;

(i) providing through an internal surface defining a conduit of the microfabricated device a flow of a fluid and present within the fluid is a compound;

(ii) moving the fluid through the conduit to bring it into contact with an agent to allow any partitioning of the compound through a partition interface formed between the fluid and the agent;

- 16 -

5 (iii) measuring the amount of compound or a derivative of the compound present during and/or after partitioning between the fluid and the agent in either the fluid or the agent, or both.

5. A method as claimed in claim 4 wherein the first and second fluid is a liquid.

6. A method as claimed in claim 4 or 5 wherein the partition interface is a third fluid.

7. A method as claimed in claim 4 or 5 wherein the partition interface is created by the first and second fluids being in contact.

8. A method as claimed in claim 7 wherein the first and second fluids are non-miscible.

9. A method as claimed in ^{claim 4} ~~any claim from 4 to 7~~ wherein a second set of first and second fluids is introduced into the conduit after introduction of a barrier pug.